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FROM: Ann R. Pokalsky
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RE: U.S. Appln. Serial No.: 09/530,209
New Attorney Docket No.: 1187-9

MESSAGE: For use in telephonic interview scheduled for 1:00 pm, Monday, March 17, 2003.

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PROPOSED AMENDMENTS IN U.S. SERIAL NO. 09/530,209 (Our Docket: 1187-9)

TO: PENDING CLAIMS 1-4, 6-8, 10, 27, and 30-41

1. (Twice Amended) An isolated DNA sequence [encoding a mitogenic cyclin or encoding an immunologically active and/or functional fragment thereof having mitogenic cyclin activity] selected from the group consisting of:

(a) DNA sequences comprising a nucleotide sequence encoding a protein comprising the amino acid sequence as given in SEQ ID NO:2;

(b) DNA sequences comprising a nucleotide sequence as given in SEQ ID NO:1;

(c) DNA sequences hybridizing under stringent hybridization conditions with the complementary strand of a DNA sequence as defined in (a) or (b);

wherein said stringent hybridization conditions comprise 4X SSC at 65° C or 4X SSC at 42° C,

[(d) DNA sequences encoding an amino acid sequence which has at least 70% sequence identity to the amino acid sequence encoded by the DNA sequence of (a) or (b);

(e) DNA sequences, comprising a nucleotide sequence as defined in any one of (a) to (d) wherein the nucleotide sequence is degenerated as a result of the genetic code ; and

(f) DNA sequences encoding a fragment of a protein encoded by a DNA sequence of any one of (a) to (e)].

2. (Twice Amended) A method for identifying and obtaining [mitogenic cyclins comprising a] a protein that interacts with CDC2a or CDC2b which comprises performing a two-hybrid screening assay wherein CDC2a is expressed as a bait and a cDNA from a cDNA library of a plant cell suspension is expressed as prey [are used and wherein said mitogenic cyclins identified as interacting with CDC2a are obtained] in a cell.

3. The method of claim 2 wherein said CDC2a is CDC2aAt.
4. (Twice Amended) An isolated DNA sequence encoding [a mitogenic cyclin] a protein that interacts with CDC2a or CDC2b obtainable by the method of claim 2 or 3.
6. A vector comprising the DNA sequence of claim 1.
7. The vector of claim 6 which is an expression vector wherein the DNA sequence is operatively linked to one or more control sequences allowing the expression of said DNA sequence in prokaryotic and/or eukaryotic host cells.
8. A host cell comprising the vector of claim 6.
10. (Twice Amended) A method for the production of a protein that interacts with CDC2a or CDC2b, said method [mitogenic cyclin or an immunologically active or functional fragment thereof having mitogenic cyclin activity] comprising culturing a host cell of any of claims 8, 32 or 34 under conditions allowing the expression of the protein and recovering the produced protein from the culture.
27. (Twice Amended) A diagnostic composition comprising [a] the DNA sequence of claim 1, and optionally suitable means for detection of said DNA sequence wherein the means for detection is a probe.
30. A vector comprising the DNA sequence of claim 4.
31. The vector of claim 30 which is an expression vector wherein the DNA sequence is operatively linked to one or more control sequences allowing the expression of said DNA sequence in prokaryotic and/or eukaryotic cells.
32. (Amended) A host cell comprising [a] the vector of claim 6.
33. (Amended) A host cell comprising [a] the vector of claim 30.
34. (Amended) A host cell comprising [a] the DNA sequence of claim 1
35. (Amended) A host cell comprising [a] the DNA sequence of claim 4.

36. The host cell of any of claims 8, 32 or 34 wherein the host cell is a bacterial, insect, fungal, plant or animal cell.

37. A diagnostic composition comprising a DNA sequence of claim 4 and optionally suitable means for detecting said DNA sequence wherein the means for detecting is a probe.

38. (Amended) A method for modulating plant cell cycle, plant cell division or growth which comprises modulating the level or activity of a [mitogenic cyclin] protein that interacts with CDC2a or CDC2b in a plant cell wherein said [mitogenic cyclin] protein comprises the sequence set forth in SEQ ID NO:2 [or a sequence having at least 70% sequence identity thereto].

39. (Amended) A method for modulating plant cell cycle, plant cell division or growth which comprises modulating the level or activity of a [mitogenic cyclin] protein that interacts with CDC2a or CDC2b in a plant cell wherein said mitogenic cyclin is encoded by:

(a) DNA sequences comprising a nucleotide sequence encoding a protein comprising the amino acid sequence as given in SEQ ID NO:2,

(b) DNA sequences comprising a nucleotide sequence as given in SEQ ID NO:1,

(c) DNA sequences hybridizing under stringent hybridization conditions with the complementary strand of a DNA sequence as defined in (a) or (b);

[(d) DNA sequences encoding an amino acid sequence which has at least 70% sequence identity to the amino acid sequence encoded by the DNA sequence of (a) or (b);

(e) DNA sequences, comprising a nucleotide sequence as defined in any one of (a) to (d) wherein the nucleotide sequence is degenerated as a result of the genetic code ; or

(f) DNA sequences encoding a fragment of a protein encoded by a DNA sequence of any one of (a) to (e)].

40. (Amended) The method of claim 39 wherein modulating the level or activity of the [mitogenic cyclin] protein that interacts with CDC2a or CDC2b is achieved by overexpressing one or more of said DNA sequences in a plant cell.

41. The method of claim 39 wherein modulating the level or activity of the mitogenic cyclin is achieved by reducing expression by one or more said DNA sequences in a plant cell.